

## CLAIMS

We claim:

1. A composition for absorbing hydrogen, comprising:  
a mixture of a polyphenyl ether and a hydrogenation catalyst.
- 5 2. The composition of claim 1, wherein the polyphenyl ether is comprised of 4 to 7 basic structural units.
3. The composition of claim 1, wherein the hydrogenation catalyst is a precious metal or a metallic salt thereof.
4. The composition of claim 3, wherein the hydrogenation catalyst is Pt.
- 10 5. The composition of claim 4, wherein the hydrogenation catalyst is present at a concentration of from about 0.5 to 5 wt%.
6. The composition of claim 1, wherein the hydrogenation catalyst is supported on a porous solid.
7. The composition of claim 6, wherein the porous solid is activated carbon,  
15 aluminum oxide, or barium carbonate, or combinations thereof.
8. The composition of claim 1, wherein the concentration of supported hydrogenation catalyst is from about 5-50 wt% of the supported catalyst containing about 1-10 wt% metal.
9. The composition of claim 1, further including a binder or filler.
- 20 10. The composition of claim 9, wherein the binder or filler is an inert polymer, a thixotropic agent, a mineral, a carbon powder, or finely divided silica.
11. The composition of claim 10, wherein the binder or filler is present at a concentration of from about 20-70 wt%.